

IN THE CLAIMS

1. (Currently amended) An optical device intended to for treating an incident X-ray beam, said device comprising:

■ a monochromator (M); and

■ an optical element (20) for conditioning the incident X-ray beam, whose the optical element including an X-ray reflective surface is able having a multilayer structure to produce a two-dimensional optical effect in order to adapt a beam directed towards in destination of the monochromator, said optical element comprising a surface reflective to X-rays of the multilayer structure type,;

characterised by the fact that wherein said reflective surface consists of a single surface, said reflective surface being shaped according to two curvatures corresponding to two different directions.

2. (Currently amended) A—The optical device according to the preceding claim 1, characterised in that wherein said single reflective surface is of the a multilayer type with a lateral gradient.

3. (Currently amended) A—The optical device according to one of the preceding claims claim 1, characterised in that wherein the single reflective surface comprises a depth gradient.

4. (Currently amended) A—The optical device according to one of the preceding claims claim 1, characterised in that wherein said reflective surface is shaped in each of the said two different directions in order to produce two respective one-dimensional effects.

5. (Currently amended) A—The optical device according to one of the preceding claims claim 1, characterised in that wherein said reflective surface has a geometry which is substantially circular in a first direction and substantially parabolic in a second direction.

6. (Currently amended) A The optical device according to the preceding claim 5, characterised in thatwherein said first direction is the a saggital direction of the optical element and the second direction is the a meridional direction of the optical element.

7. (Currently amended) A The optical device according to one of Claims claim 1 to 4, characterised in thatwherein said reflective surface has a substantially toroidal geometry.

8. (Currently amended) A The optical device according to one of Claims claim 1 to 4, characterised in thatwherein said reflective surface has a substantially paraboloidal geometry.

9. (Currently amended) A The optical device according to one of Claims claim 1 to 4, characterised in thatwherein said reflective surface has a substantially ellipsoidal geometry.

10. (Currently amended) A The optical device according to one of the preceding claims claim 1, characterised in thatwherein said reflective surface is able to reflect rays of the lines Cu-K α or Mo-K α .

11. (Currently amended) A The optical device according to one of the preceding claims claim 1, characterised in thatwherein the monochromator is comprises a germanium crystal, and the optical conditioning element comprises a W/Si multilayer coating with a lateral gradient.

12. (Currently amended) A The optical device according to one of the preceding claims claim 1, characterised in thatwherein the optical element of the optical device has a length of around 2 cm, said optical device being able to be usedusable with a source of X-rays whose having a size is of around a few tens of microns by a few tens of microns, in order to produce a sample spot of around 300*300 microns.

13. (New) The optical device according to claim 4, wherein a first one of the one-dimensional effects is a collimation.

14. (New) The optical device according to claim 13, wherein

a second one of the one-dimensional effects is a collimation or a focusing.

15. (New) The optical device according to claim 1, wherein said reflective surface has a geometry defined by an open or closed curve different from a circle in a first one of the directions and substantially parabolic in a second one of the directions.

16. (New) The optical device according to claim 1, wherein said reflective surface has a geometry substantially elliptical in a first one of the directions and substantially parabolic in a second one of the directions.

17. (New) The optical device according to claim 1, wherein said reflecting surface has a geometry substantially parabolic in the two different directions.